Appl. No. 10/666,084   PATENT
Amdt. dated December 21, 2006
Reply to Office Action of September 21, 2006

REMARKS/ARGUMENTS

Claims 1, 8, 12, and 25 have been amended. Claims 23, 24 and 26 have been canceled
No new claims have been added. Accordingly, claims 1-22, 25, and 27-34 remain pending.
Support for the claims can be found throughout the specification, the drawings and the original
claims. No new matter is introduced by virtue of this response.

Claims 6, 8, 10, 19, and 21 are rejected under 35 U.S.C. 112, second paragraph, for
failing to particularly point out and distinctly claim the subject matter which the applicant
regards as his invention. Claims 1-7, 9, 11-18, 20, and 22-34 are rejected under 35 U.S.C. 102(e)
as being anticipated by Beshai et al. (US Patent No. 6,744,775, hereinafter "Beshai").

Rejection of the claims under 35 U.S.C. 112

Claims 6, 8, 10, 19, and 21 were rejected to for improper antecedent basis. These and
other claims have been amended to provide proper antecedent basis. Accordingly, Applicant
believes these amendments overcome the indefiniteness rejections.

Rejection of the claims under 35 U.S.C. 102

Embodiments of the present invention relate to data processing in telecommunication
systems. In particular, certain embodiments disclose a control processor including a failure
detector configured to detect failures in a data plane. Amended independent claims 1, 12, and 25
recite this feature.

> 1. A method for handling failures in a data plane of a plurality of data
> planes, the method comprising:
> generating a partitioned data structure, wherein the partitioned data
> structure is generated from a control processor including a failure detector, and
> the data structure includes one or more partitions for each of the plurality of data
> planes, each partition including routes for a source data plane to a destination data
> plane;
> . . . detecting a failure in a failed data plane in the plurality of data planes,
> wherein the failure detector is configured to detect the failed data plane in the
> plurality of data planes; and
> notifying data planes other than the failed data plane in the plurality of
> data planes that the failed data plane has failed,
> wherein the notified data planes do not send data for the one or more
> routes found in a partition associated with the failed data plane. (Emphasis
> added)

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12. A method for handling failures in a data plane in a plurality of data planes, the method comprising:

generating a partitioned data structure, wherein the partitioned data structure is generated from a control processor including a failure detector, and the data structure includes one or more partitions for each of the plurality of data planes, each partition including routes for a source data plane to a destination data plane;

. . . detecting when a failure in a failed data plane in the plurality of data planes has been resolved, wherein the failure detector is configured to detect the failed data plane in the plurality of data planes; and

sending the failed data plane a partition associated with the failed data plane,

wherein the partition allows the failed data plane to resume sending data according to the routes found in the partition. (Emphasis added)

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25. A system for handling data plane failures, the system comprising:
a plurality of data planes; and
a control processor comprising:

a receiver configured to received routes for route data, each route specifying source data plane in which data is sent and a destination data plane in which data is received;

a failure detector configured to detect a failure in a data plane in the plurality of data planes;

a data structure generator configured to generate a data structure that groups the routes by a source data plane for each of the plurality of data planes; and

a distributor configured to distribute the grouped routes to each associated source data plane,

wherein the plurality of data planes comprise storage for storing the grouped routes that are received from the distributor. (Emphasis added)

Claims 1-7, 9,11, 18, 20, and 22-34 were rejected as being unpatentable over Beshai.

These claim rejections are traversed as follows.

As a threshold matter, the Examiner is respectfully reminded that pending independent claims 1, 12, and 25 stand rejected as anticipated, and not merely obvious, in view of Beshai.

[t]he distinction between rejections based on 35 U.S.C. 102 and those based on 35 U.S.C. 103 should be kept in mind. Under the former, the claim is anticipated by the reference. No question of obviousness is present. In other words, for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the

> claimed invention either explicitly or impliedly. Any feature not directly taught
> must be inherently present. (Emphasis added; MPEP 706.02)

Here, Beshai fails to teach either explicitly or impliedly, a control processor including a failure
detector configured to detect failures in a data plane.

Beshai discloses a method for updating link state information across a network. In
particular, the method of Beshai utilizes a routing table, controller, and link nodes to update link
state information (See Col 6, liens 59-67). Each node is configured to periodically transmit
signals to neighboring link nodes in order to detect possible link state changes (See Col. 7, lines
18-31). Furthermore, once a state change is detected, such as a node failure, the node reports the
link state information to a controller.

> The present invention requires that each node monitor its links form neighboring
> nodes and report link state information to at least on controller. The controller
> then determines which nodes are affected by the received link state information
> and indicates to the affected nodes a temporary change to the previously
> distributed nodal routing table. (Emphasis added; Col. 6, line 67-Col. 7, line 6)

As explicitly recited above, the invention of Beshai *requires* that each node monitor the links in
order to detect changed state information. That is, the *detection mechanism* for detecting failed
nodes lies *outside of the controller.* Moreover, the controller only determines which nodes are
affected by the failed link node, and does not *detect failures* of failed link nodes. Thus, Beshai
not only fails to disclose, but in fact teaches away from a *controller including a failure detector*
configured to detect failures in a data plane as substantially recited in the pending independent
claims.

The method of detecting failures through the use of link nodes as described in Beshai,
could lead to a large number of status messages being received by the controller. If multiple
neighboring nodes simultaneously detect a failure of one link node, all the detecting nodes would
send status information to the controller. This would result in a bottleneck of the system, thereby
hindering system performance.

Based upon the failure of the cited art relied upon by the Examiner to teach either
explicitly or even impliedly, all elements of the pending independent claims, it respectfully
requested that these claims are patentable over the cited references. All other claims depend

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from the independent claims discussed above, and are believed to be patentable for at least their dependency on an allowable base claim.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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